

Giving Every Macedonian Student a Gateway to the World

Just a little over three years ago the President of Macedonia left for an official visit to China and returned with a promise and a dream: to increase the number of computers available to school children. Macedonia, a land locked country about the size of the U.S. state of Vermont, has over 400 primary and secondary schools scattered in about 1,000 buildings across its mountains, deep basins and valleys. In 2002, it is estimated that less than half of them had working computers.

As of September 2005, labs filled with computers running new Microsoft software are operating in all primary and secondary schools. An army of teachers, 6,000 strong, newly trained in basic IT, are ready to help students get started. Schools, which two years ago didn't even have a telephone, now have a link to the entire world. Every lab has broadband internet access via the country's first nationwide wireless broadband network—a direct result of the complex consortium of many partners that emerged from a seemingly straightforward donation of 5,300 basic computers.

Like many consortia, this one was not born naturally — it evolved. And like most ambitious dreams, this one did not “just happen” — it depended on visionaries and creative thinkers to make it a reality. The public-private consortium includes the Government of Macedonia (GoM), its Ministry of Education and Science (MoES), the U.S. Agency for International Development (USAID), the People's Republic of China (PRC), and Microsoft.

MACEDONIA CONNECTS LESSONS LEARNED

Partnerships Can Work

This project is a good example of how something that started out rather serendipitously worked in the end. Each of the organizations involved in bringing computers and internet to Macedonia's schools has different business issues, different stakeholders to which they must answer, and different processes for procurement. As a result, it was not easy to put the pieces of this partnership together in such a way that the timing always worked. Partnerships can slow down the process, but the benefits outweigh the inconveniences.

Donations Cost Money

In order for the schools to utilize the generous donations of computers and software from the PRC and Microsoft effectively, much work had to be done to distribute the computers, install them, and train IT and other teachers how to use them. USAID's project costs alone are estimated at \$1 million for installing the 5,300 computers and 300 printers in labs and \$300,000 for training 4,000 teachers in basic IT skills. These estimates do not include administrative time, or contributions by other partners.

Timing is Important

The Macedonia Connects project started in September 2004 but an ISP was not chosen until April 2005 because of the competitive bid process. This delay was actually positive for the project in that the telecom monopoly was dissolved allowing for more growth in the market and new technologies emerged to make building an effective network cheaper and easier.

The Regulatory Environment is Critical

Another USAID project, the WTO Compliance Activity, worked with the GoM to develop a new telecom law to help open the market prior to the end of the MakTel monopoly on December 31, 2004. Without the end of the monopoly and strong regulations in place, it would not have been possible to set up a nationwide wireless broadband network or to increase competition in the internet market and introduce services such as VOIP effectively.

Basics Matter

Security, insurance, and maintenance of the computers were not widely considered in the initial planning stages and caused problems during secondary school installation. Problems with electricity became an issue for the primary school installation. It makes sense to require evidence of security and insurance before transferring equipment or installing computers. Sign an agreement with each school that they will be responsible for maintenance of the computers. Provide training for LAN administration as needed/possible. Have schools devise maintenance plans to ensure lab sustainability.

If Possible, Think Globally

Because Macedonia is relatively small in land size, it is possible, and even more cost effective, to do programs on a national, rather than a pilot scale. Macedonia Connects is a good example of scalability. By using the schools as a platform across the country, On.Net was able to build a network to a scale large enough so that the resulting market would increase the chances of internet sustainability, especially in rural areas. With this scale, On.Net should be able to lower the prices of connectivity dramatically and offer a special teacher/student package at €9 - €15 per month.

The Real Work is Just Beginning

The real work starts once the computers and connectivity are in place. How are teachers and students to be motivated to use the increased ICT capacity? Students currently study IT (or infomatics) in Macedonia starting in 7th grade. How will the curriculum be revised to integrate IT in early primary school? Who will help teachers create digital content in Macedonian, Albanian, and other languages in use in the country? And... how will it be possible to get even more computers and internet access in classrooms in Macedonia so that the nations 330,000 primary and secondary school students are able to learn 21st century IT skills and be more competitive in the labor market?